3.5 BIOLOGICAL RESOURCES

Significance Criteria

Significance criteria for impacts to wildlife or threatened and endangered species is derived from 40 CFR 1508.27(b)(9) and (b)(10), and is also determined through review with the U.S. Fish and Wildlife Service (USFWS) pursuant to its statutory authority under 16 USCA 1532(15). Specifically, a project would have a significant adverse impact on biological resources if it would:

- Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the WDNR or USFWS;

- Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the WDNR or USFWS;

- Have a substantial adverse effect on Federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, and coastal) through direct removal, filling, hydrological interruption, or other means;

- Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites;

- Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance; or

- Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan.

3.5.1 REGIONAL SETTING

The description of existing conditions and analysis of effects to biological resources is based upon biological field surveys conducted to document existing habitat types and determine the potential for occurrence of Federally listed species within the project site. Furthermore, a review of the Wisconsin Natural Heritage Database (WNHDB) and informal consultation with the USFWS for reported occurrences of Federally listed species within the project vicinity was assessed and compared to the existing site conditions (**Appendix G**). AES biologists John Miller

and Tim Armstrong conducted the field assessment and wetland delineation of the DGP property during the period April 19-21, 2004. The Keshena site is described based on a site visit by AES staff, review of aerial site photos, published data, and information from personal communications.

KENOSHA PROJECT SITE

Sugar maple-basswood-beech forests, oak forest, oak savanna and prairies dominated the historic vegetation of the Kenosha region. Today, most of the region is agricultural or developed. As a consequence of urban, suburban, and agricultural development, the region is dominated by weedy vegetation, and forests are reduced to scattered woodlots or strips lining rivers and streams of the area. Several man-made ponds, the paved and developed portions of the property, a reclaimed landfill, and the floodplain forest of Kilbourn Road Ditch occur on the site.

KESHENA SITE

The 17± acre Keshena site borders the Northern Highland and Central Plain physiographic provinces of Wisconsin (Martin, 1965). The topography is relatively flat with regional habitats consisting of agriculture and mixed deciduous/coniferous forests. Current land use of the Keshena site is limited to gaming operations and forestry.

3.5.2 VEGETATION COMMUNITIES

KENOSHA PROJECT SITE

Vegetation communities within the Dairyland Greyhound Park property consist of agriculture, developed/ruderal, aquatic, floodplain forest, southern dry forest, shallow marsh, and eastern cottonwood/willow scrub. Acreage and percent area of habitat types occurring within the site are provided in **Table 3.5-1,** followed by a discussion of the habitat types. A habitat map of the project site is presented as **Figure 3.5-1.** Site photos are shown in **Figure 3.5-2** and **Figure 3.5-3**.

TABLE 3.5-1
SUMMARY OF COMMUNITY TYPES WITHIN THE PROJECT SITE

Habitat Type	Acres	Percent Area
Developed/Ruderal/Agriculture	176.2	79
Aquatic	20.0	3
Floodplain Forest	5.0	6
Southern Dry Forest	6.3	9
Shallow Marsh	13.2	2
Eastern Cottonwood/Willow Scrub	3.3	1

SOURCE: Wisconsin Natural Heritage Inventory, 2004; AES, 2004

Figure 3.5-1 Project site habitat map

Figure 3.5-2

Figure 3.5-3

Developed/Ruderal

Developed land within the DGP (i.e. racing, parking, and clubhouse facilities) covers nearly half of the property. To the north of the racetrack is a pond (Pond D) dominated on the periphery by reed canary grass (*Phalaris arundinacea*), broad-leaved cattail (*Typha latifolia*), and Fremont cottonwood (*Populus fremontii*). Historically a wetland, this pond was excavated when the racetrack was developed.

The western side of the property, bisected by the entrance road running north to south, is largely composed of ruderal habitat. This area has been used for landfill and has two excavated ponds (Ponds B and C) and a shallow marsh A (**Figure 3.5-1**). Upland habitat within the study area consists primarily of ruderal species including bentgrass (*Agrostis perennans*), scarlet pimpernel (*Anagallis arvensis*), spotted centaurea (*Centaurea maculosa*), field thistle (*Cirsium discolor*), bull thistle (*Cirsium vulgare*), Queen Anne's lace (*Daucus carota*), common teasel (*Dipsacus sylvestris*), cranesbill (*Geranium dissectum*), Canada hawkweed (*Hieracium canadense*), peppergrass (*Lepidium densiflorum*), white clover (*Melilotus alba),* common red reed (*Phragmites australis*), English plantain (*Plantago major*), Kentucky bluegrass (*Poa pratensis*), self heal (*Prunella vulgaris*), tumble mustard (*Sisymbrium altissimum*), common dandelion (*Taraxacum officinale*), and blue vervain (*Verbena hastata*).

Agricultural

There were two agricultural areas on the site, which extended onto neighboring properties. These were fallow at the time of the biological surveys.

Aquatic

Three artificial ponds and a retention basin are located on the property. Two of the ponds are on the western half of the site. The third and largest pond, excavated on the site of a wetland visible on the Pleasant Prairie USGS map, is fringed by a cattail and reed canary grass marsh. This pond drains to the Detention basin E and then to a municipal storm drain. Canadian geese (*Branta canadensis*) and beaver (*Castor canadensis*) frequent these ponds.

Floodplain Forest

Floodplain forest is located adjacent to the Kilbourn Road Ditch on the western side of the property. This is a community dominated by mature deciduous hardwood trees growing on alluvium. The dominant tree species observed in this community was the box elder (*Acer negundo*). The soil is well drained and is subject to flooding. Due to the frequent flooding of this habitat, a shrub layer is sparse. The herbaceous layer is typically composed of jewelweed (*Impatiens capensis*) and nettles (*Urtica dioica holosericea*).

Southern Dry Forest

The southern dry forest community is located along the periphery of the floodplain forest and the ruderal grassland. Oaks are the dominant species of trees within this upland community. White oaks (*Quercus alba*) and black oak (*Quercus velutina*) are the dominant species of deciduous trees. A typical shrub layer for this community is comprised of brambles (*Rubus allegheniensis*), gray dogwood (*Cornus racemosa*), and American hazelnut (*Corylus americana*).

Shallow Marsh

Several artificial ponds and a shallow marsh are located on the property. The shallow marsh ("Pond A") and the fringes of these ponds are vegetated with reed canary grass (*Phalaris arundinacea*), and to a lesser extent, cattail (*Typha angustifolia*) and glossy-leaf aster (*Aster firmus*).

Eastern Cottonwood/Willow Scrub

Several eastern cottonwoods (*Populus deltoides*) and prairie willows (*Salix humilis*) either line the edges of the ponds or surround the wetland on the site. The understory of this scrub was reed canary grass.

KESHENA SITE

The 17±-acre site contains two habitats: ruderal/developed and mixed deciduous/coniferous forest. These plant community types are discussed below; acreage and percent area of vegetation types occurring within the project site are provided in **Table 3.5-2**. A vegetation map of the alternate site is presented as **Figure 3.5-4**.

TABLE 3.5-2
SUMMARY OF VEGETATION COMMUNITIES WITHIN THE KESHENA SITE

Habitat Type	Acres	Percent Area
Ruderal/Developed	15.14	90
Mixed Deciduous/Coniferous Forests	1.74	10

SOURCE: Wisconsin Natural Heritage Inventory, 2004; AES, 2004

Ruderal/Developed

The majority of the property is comprised of the casino facilities, hotel, roads, and parking areas. Plant communities within this area are primarily ornamental vegetation, manicured grassland, and non-native weeds.

Figure 3.5-4

Mixed Deciduous/Coniferous Forests

Mixed-Deciduous Coniferous Forests on the Menominee Reservation are comprised of white and red pine, oaks, maples, tamarack, hemlock, spruces, basswood, birch, and poplar species of trees. A large majority of the area is second growth with a dense understory of shrubs, such as hazel brush. The mixed deciduous/coniferous habitat is located south of the project site past the parking lot.

Site photos of the Keshena site are shown in **Figure 3.5-5.**

3.5.3 WILDLIFE

A variety of wildlife may use the habitats that occur on both properties. Species observed or identified (via call, scat, burrows, etc.) during the site survey of the Kenosha project site include: red-winged blackbird (*Agelaius phoeniceus*), raccoon (*Procyon lotor*), and evidence of beaver (*Castor canadensis*).

3.5.4 FEDERALLY LISTED SPECIES

Federally listed species include those plant and animal species that are listed as endangered or threatened under the Federal Endangered Species Act (FESA), formally proposed for listing, or listed by local USFWS offices as a Federal Species of Concern. A target species list of Federally listed species that may potentially be affected by the Proposed Action and alternatives was compiled based upon a review of pertinent literature, aerial photographs, site topographic maps, consultation with the USFWS and other local experts, a query of the WNHDB for reported occurrences of Federally listed species within the project vicinity, and from the results of biological field surveys (**Appendix G**).

Other special-status species may be recognized by State or other agencies. The species recognized at the State or local level generally receive no specific protection on Federal trust lands, and are not afforded protection by FESA. Federally listed species that may potentially be affected by projects in the vicinity of the Kenosha project site are identified in **Table 3.5-3**.

Species that are listed as endangered or threatened by WDNR; designated as endangered or rare or species of concern, pursuant to Wisconsin Administrative Code, Natural Resources (10, 27, and 29); designated as fully protected, pursuant to Wisconsin Statute, Chapter 29.604; or plants or animals that meet the definitions of rare or endangered under Wisconsin State Law; appear on the lists in **Appendix O**. These State and local special status species were evaluated in terms of their contribution to the general biodiversity of vegetation of the region, Project Site, and Keshena Site, if found to be present.

Figure 3.5-5

KENOSHA PROJECT SITE

Species with potential to occur on the Kenosha site were compiled based on a review of pertinent literature, informal consultation with the USFWS **(Appendix O)**, the results of a WNHDB query of all reported occurrences of special-status species within Kenosha County and a reconnaissance-level site assessment (**Table 3.5-3**). Habitat requirements for each special-status species were assessed and compared to the habitats occurring within the property and adjacent areas.

The final target species list contains those Federally threatened, endangered, or species of concern that occur within Kenosha County.

Based upon the review of regionally occurring Federally listed species and their habitat requirements, and the results of the field assessment, the property and/or surrounding vicinity represents potential habitat for one Federally listed animal species and two Federally listed plant species. The status, biology, regional distribution, and site-specific discussion of the target species are discussed below.

Eastern Massasauga rattlesnake (*Sistrurus catenatus catenatus*)

Habitat for the Eastern Massasauga rattlesnake is present within the Kilbourn Road Ditch and floodplain forest community types. Until 1975 a bounty was placed on massasauga rattlesnakes. Combined with the effects of the bounty was the loss of habitat to cause the Eastern Massasaugas listing as a Federal Candidate Species listing. The WDNR reports no specimens found in Kenosha County, and no rattlesnakes were observed on the project site.

Prairie bush clover (*Lespedeza leptostachya*)

The prairie bush clover inhabits dry to mesic prairie land. The closest known occurrence is from Racine County, which is adjacent to Kenosha County. The grassland on the site is classified as ruderal/disturbed and does not support a prairie community. This species was not observed during the site assessment.

Prairie white-fringed orchid (*Platanthera leucophaea*)

Mesic prairies and sedge meadows provide optimal habitat for the prairie white-fringed orchid. These plant community types do not occur on the DGP property and this plant species was not observed during the biological assessment. The last reported occurrence in Kenosha County is from 1939 (University of Wisconsin, 2004).

TABLE 3.5-3
TARGET SPECIES LIST FOR THE KENOSHA PROJECT SITE

Species	Status	Distribution	Habitat Description	Period of Identification
Reptiles				
Sistrurus catenatus catenatus Eastern massasauga rattlesnake	C	Range runs from central New York and southern Ontario to Iowa and Missouri. Historically, massasaugas were found across the southern half of Wisconsin.	River bottom lowland forests and associated open wetlands. They individually seek out crayfish or mammal burrows, sawdust piles, or old root canals. Crayfish burrows, which are built in river bottom dugouts with above ground mud chimneys, are the favorite of most massasaugas.	Spring - Fall
Plants				
Lespedeza leptostachya Prairie bush clover	FT	This species is endemic to Midwestern prairies of Minnesota, Wisconsin, Iowa and Illinois. Roughly 90% of all known plants occur within a "core area" of northern Iowa and adjacent southwestern Minnesota. Reported from the adjacent county of Racine.	Inhabits dry sandy prairies. The nearest reported occurrence is located in Racine County.	July - August
Platanthera leucophaea Prairie white-fringed orchid	FT	Most extant populations are from Wisconsin, Illinois, Michigan and Ohio.	Mesic prairies, especially on calcareous, rich, sandy or deep black soils, and degraded sedge meadows.	June-August

NOTES: FE Listed as Endangered by the USFWS.
FT Listed as Threatened by the USFWS.
FPD Proposed for delisting by the USFWS.
C Candidate for future listing by the USFWS.
SOURCE: USFWS, 2004; WNHDB, 2004; and AES, 2004.

KESHENA SITE

Species with potential to occur on the Keshena site were compiled based on a review of pertinent literature, informal consultation with the USFWS **(Appendix O)**, and the results of a WNHDB query of all reported occurrences of special-status species within Menominee County (**Table 3.5-4**). Habitat requirements for each special-status species were assessed and compared to the habitats occurring within the property and adjacent areas. The final target species list contains those Federally threatened, endangered, or species of concern that occur within Menominee County.

Karner blue butterfly (*Lycaeides melissa samuelis*)

The life cycle of the Karner blue is closely tied to wild lupine plant (*Lupinus perennis*). A wide array of habitats support this species including utility rights-of-way, abandoned agricultural fields, managed forest lands, military training areas and bombing ranges, managed and un-managed barrens, savannas, and prairie areas. Lupines are disturbance dependent, often colonizing successional habitats.

The Karner Blue Habitat Conservation Plan was the first Habitat Conservation Plan (HCP) developed in the nation. The purpose of the HCP is the issuance of a permit, pursuant to the provisions of section 10 (a) (1) (B) of the FESA, which would authorize the incidental take of Karner blue butterfly in Wisconsin for 10 years. Approved in September 1999, the HCP is an agreement between public and private land managers, the USFWS, and the WDNR to protect and manage lands for the butterfly. The goals of the HCP are outreach/education programs and broad-scale land management strategies that ensure a balance between habitat loss and habitat gain for the species (WDNR, 2004). The plan extends across the mid-region of Wisconsin, including the Keshena site, and is shown in **Figure 3.5-6**.

Bald Eagle (Haliaeetus leucocephalus)

The bald eagle was placed on the Wisconsin Endangered Species List in 1972 and the Federal list in 1973. In 1978, the bird was down-listed to “threatened” status because Wisconsin had a higher and more stable population than other states. As of 1991, 414 active territories were located, which exceeded the State goal of 360.

Breeding habitat for the bald eagle consists of large trees near inland rivers and lakes. These areas are away from human disturbance in close proximity to their prime food source, fish. Nests are constructed in February to March and average three to four feet wide by three feet deep. Although multiple nests may be built in a territory, only one nest is used each season. Eggs are laid in March to April, and approximately 40 days later the chicks are born. Both parents perform rearing duties. Three months after hatching, the chicks are able to fly. The existing casino site

TABLE 3.5-4
TARGET SPECIES LIST FOR THE KESHENA SITE

Species	Status	Distribution	Habitat Description	Period of Identification
Invertebrates				
Lycaeides melissa samuelis Karner blue butterfly	FE	Central and northwest counties of Wisconsin.	Agriculture fields, mowed right-of-ways, forests, and military lands; prairie, oak savanna, and jack pine areas and along lakeshore dunes with wild lupine.	April-July
Birds				
Haliaeetus leucocephalus *Bald eagle*	FT	Largest statewide breeding concentration is located in the northern third of Wisconsin.	Breeding habitat is forested areas near rivers and lakes.	February-March (Breeding)
Mammals				
Canis lupus Gray wolf	FT	Central and northern Wisconsin.	Northern and central forested areas.	Year round

SOURCE: USFWS, 2004; WNHDB, 2004; and AES, 2004.

NOTES: FE Listed as Endangered by the USFWS.
FT Listed as Threatened by the USFWS.
FPD Proposed for delisting by the USFWS.
C Candidate for future listing by the USFWS.

Figure 6. butterfly map

does not provide typically suitable nesting or foraging habitat for bald eagles. Though the site is developed and has a high level of human activity at all hours of day and night, personal interviews with facility staff indicate fairly regular occurrences of this species in the project vicinity (Jim Tucker, personal communication).

Gray wolf (Canis lupus)

The gray wolf is found in central and northern Wisconsin. Breeding occurs in late January and February. Approximately two months later, the pups are born. By August the pups are fully independent and take their place within the pack hierarchy. Habitat for this species is large contiguous blocks of mixed forests with few roads in central and northern Wisconsin. Large contiguous blocks of mixed forest are not found within the existing casino site. The site is primarily ruderal/developed and receives a high level of human activity. These conditions preclude the presence of gray wolf at the site. Personal interviews with facility staff indicate no reported occurrences of this species in the project vicinity (Jim Tucker, personal communication).

3.5.5 WATERS OF THE U.S.

KENOSHA PROJECT SITE

AES biologists conducted a delineation of "waters of the U.S." occurring within the 223± acre DGP property (**Appendix H**), and has received a jurisdictional determination letter from the USACE (**Appendix Q**). AES biologists Tim Armstrong and John Miller conducted the field delineation on April 19, 20, and 21, 2004. All areas were viewed to the degree necessary to determine the presence or absence of jurisdictional "waters of the U.S." Kilbourn Road Ditch and its floodplain forest are the only waters of the U. S. on the site. The wetland and excavated ponds are isolated from Kilbourn Road Ditch and not connected to a tributary of a navigable waterway; therefore, they are not "waters of the U. S." However, Kilbourn Road Ditch is a tributary to the Des Plaines River thence Kankakee River thence Illinois River thence Mississippi River, which is a navigable waterway. A "Waters of the U.S." delineation map is presented as **Figure 3.5-7**. The jurisdictional waters of the site occupy a total of 4.13 acres. An acreage summary of the jurisdictional waters is presented in **Table 3.5-5** below.

TABLE 3.5-5
WATERS OF THE U.S. ACREAGE SUMMARY

Channel Reach	Length (Feet)	Area (Square Feet)	Acreage
Kilbourn Road Ditch	1700	179,903	4.13

SOURCE: AES, 2004

Figure 3.5-7 Waters of the U.S. map for the project site

KESHENA SITE

Drainage at the Menominee Casino is currently achieved through a system of underground concrete pipes owned and operated by the Tribe. Stormwater runoff flows offsite to a low-lying field southeast of the casino property, eventually discharging into the Wolf River. No retention basins currently exist on the property. Based upon previous field assessments, no "waters of the U.S." were apparent within the 17± acre Menominee Reservation site (Overstreet and Mier, 1993).